

CLAIMS

1. A legged robot, comprising:

a torso;

a leg link, which is swingably connected to the torso;

storing means for storing leg tip gait data describing a time-series change in a target leg tip motion;

storing means for storing torso gait data describing a time-series change in a target torso motion, which enables walking following the change in the target leg tip motion;

torso motion detection means for detecting an actual torso motion;

deviation calculation means for calculating a deviation of the actual torso motion from the target torso motion; and

correction means for determining a correction quantity from the calculated deviation based on a prescribed transfer function, and for correcting the torso gait data stored in the storing means for storing torso gait data based on the correction quantity.

2. The legged robot according to Claim 1, wherein said deviation calculation means calculates a deviation of an actual torso acceleration from a target torso acceleration.

3. The legged robot according to Claim 2, wherein said correction means determines the correction quantity based on a disturbance force that has been computed from the acceleration deviation and a prescribed transfer function.

4. The legged robot according to Claim 3, wherein said transfer function comprises a proportional element.

5. The legged robot according to Claim 4, wherein said transfer function comprises a first-order lag element and/or a second-order lag element.

6. The legged robot according to Claim 3, wherein said correction means further corrects a target torso position by adding a quantity that is a result of feedback-processing of a

deviation of an actual torso position from a target torso position that has been corrected based on the acceleration deviation.

7. The legged robot according to Claim 4, wherein said correction means further corrects a target torso position by adding a quantity that is a result of feedback-processing of a deviation of an actual torso position from a target torso position that has been corrected based on the acceleration deviation.

8. The legged robot according to Claim 5, wherein said correction means further corrects a target torso position by adding a quantity that is a result of feedback-processing of a deviation of an actual torso position from a target torso position that has been corrected based on the acceleration deviation.

9. A walking control method of a legged robot, comprising the steps of:
storing leg tip gait data describing a time-series change in a target leg tip motion;
storing torso gait data describing a time-series change in a target torso motion,
which enables walking following the change in the target leg tip motion;
detecting an actual torso motion;
calculating a deviation of the actual torso motion from the target torso motion;
determining a correction quantity from the calculated deviation based on a prescribed transfer function, and correcting the stored torso gait data based on the correction quantity; and
instructing the corrected torso gait data to a joint angles computation device of the robot.

10. The walking control method of the legged robot according to Claim 9, wherein said step of calculating the deviation calculates a deviation of an actual torso acceleration from a target torso acceleration, and said step of correcting determines the correction quantity based on a disturbance force calculated from the acceleration deviation and the prescribed transfer function.

11. The walking control method of the legged robot according to Claim 10, wherein said step of correcting further corrects a target torso position by adding a quantity that is a result of feedback-processing of a deviation of an actual torso position from a target torso position that has been corrected based on the acceleration deviation.